

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2. (canceled).

3. (original) A module for compensating chromatic dispersion of a line optical fiber (1) in a plurality of contiguous and non-overlapping spectral bands each covering at least 30 nanometers, characterized in that the module includes a structure (9) carrying a plurality of submodules (4, 8) at least one of which is separable from the structure (9), which are disposed in series, which are interconnected by one or more connections (6) identifiable to the naked eye without optical measurement and accessible from the outside without damaging the module, and each of which includes a support to which is fixed at least one optical fiber (2, 7) for compensating chromatic dispersion, at least one optical fiber (2) of said plurality of compensation optical fibers (2, 7) having a compensation ratio from 0.9 to 1.1 for the center wavelength of one of said spectral bands, at least two submodules (4, 8) having compensation optical fibers (2, 7) of different kinds.

4. (original) A compensation module according to claim 3, characterized in that the spectral bands are bands C and L.

5. (previously presented): A compensation module according to claim 3, characterized in that each compensation optical fiber has a compensation ratio from 0.9 to 1.1 for the center wavelength of one of the spectral bands.

6. (original) A compensation module according to claim 3, characterized in that each connection comprises at least one weld.

7. (original) A compensation module according to claim 3, characterized in that each connection comprises at least one connector.

8. (original) A compensation module according to claim 3, characterized in that the submodules are independent of one another.

9. (original) A compensation module according to claim 3, characterized in that the module comprises only two submodules.

10. (original) A compensation module according to claim 3, characterized in that the compensation optical fibers of all the submodules are the same length.

11. (original) A compensation module according to claim 3, characterized in that each submodule comprises only one compensation optical fiber.

12. (original) A method of producing an optical transmission line, the method including a step of installing a line optical fiber (1) and a compensation module according to claim 3 for said line optical fiber.

13. (currently amended): A method of improving an optical transmission line comprising a line optical fiber (1) and a pre-existing and previously used compensation module for compensating chromatic dispersion of the line optical fiber in a given spectral band, including a module that comprises plurality of submodules, at least one of which is separable from the module, wherein the plurality of submodules are disposed in series and interconnected by one or more connections identifiable to the naked eye without optical measurement and accessible from the outside without damaging the module, and wherein each of the submodules includes a support to which is fixed at least one optical fiber for compensating chromatic dispersion in the given spectral band, the compensation optical fiber is the same kind for the plurality of submodules according to claim 1 for said line optical fiber, the method comprising one or more exchange steps each consisting of removing from said module one of the plurality of submodules a submodule (5) and replacing it in said module by a with another submodule (8) whose compensation optical fiber (7) is of a different kind to the optical fiber (2) of the submodule (5) that has been removed, in order to obtain a module according to claim 3 for compensating chromatic dispersion of a line optical fiber (1) in a plurality of contiguous and non-overlapping spectral bands each covering at least 30 nanometers; and wherein at least one

optical fiber (2) in one of the remaining submodules has a compensation ratio from 0.9 to 1.1 for the center wavelength of one of the spectral bands.

14. (original) A method according to claim 13 of improving an optical transmission line, characterized in that at least one of the original submodules (4) has not been subjected to and is not subjected to any of said exchange steps.

15. (new): A method of operating a multi-band transmission optical fiber line, comprising:

providing a main optical fiber line;
providing a compensation module for compensating chromatic dispersion in the main optical fiber line; wherein the compensation module comprises a first submodule comprising a first dispersion compensation fiber having a first length, and a second submodule comprising a second dispersion compensation fiber having a second length; and wherein the first dispersion compensation fiber and the second dispersion compensation fiber are selected to compensate for chromatic dispersion in the main optical fiber line when operating in a first band so that the combined first length and second length compensates for chromatic dispersion in the first band more effectively than the first length alone and the second length alone;

initially transmitting information over the main optical fiber line in the first band;
later replacing the second submodule with a third submodule comprising a third dispersion compensation fiber having a third length, and wherein the third dispersion

compensation fiber is selected to compensate for chromatic dispersion in the main optical fiber line when operating in a second band so that the combined first length and third length compensates for chromatic dispersion in the second band more effectively than the first length alone and the third length alone;

after replacing the second submodule with a third submodule, transmitting information over the main optical fiber line in the second band; and

wherein the second and third submodules are removable from the module and exchangeable with each other; and

wherein, when inserted in the module, the second and third submodules, respectively, are optically connected to the module by one or more connections identifiable to the naked eye without optical measurement and accessible from the outside without damaging the module.

16. (new): The method of claim 15, wherein the first submodule and the second submodule are associated in series when optically connected to the module, and wherein the first submodule and the third submodule are associated in series when optically connected to the module.

17. (new): The method of claim 15, wherein the first length equals the second length.

18. (new): The method of claim 15, wherein the first band is C band.

19. (new): The method of claim 18, wherein the second band is L band.

20. (new) A module assembly for compensating chromatic dispersion of a line optical fiber operating in different bands, comprising at least three submodules; wherein a first set of two of the plurality of modules, when serially coupled within the module, compensates for chromatic dispersion for optical signals transmitted in a first band, and a second set of two of the plurality of modules, when serially coupled within the module, compensates for chromatic dispersion for optical signals transmitted in a second band; and wherein at least two of the submodules are modular so as to be readily exchangeable within the module.

21. (new) The compensation module according to claim 3, wherein each compensation optical fiber has a negative chromatic dispersion.